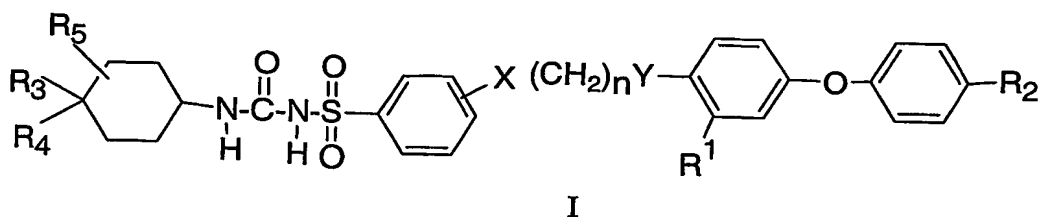


WHAT IS CLAIMED IS:

1. A compound of Formula I, including pharmaceutically acceptable salts thereof



wherein R¹ is selected from the group consisting of H, Cl, F, and C₁-4alkyl, where C₁-4alkyl is optionally substituted with 1-3 halogen atoms independently selected from F and Cl;

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R² is selected from the group consisting of H, Cl, F, C₁-4alkyl, OC₁-4alkyl, and -S(O)₂CH₃, where C₁-4alkyl and OC₁-4alkyl are optionally substituted with 1-3 halogen atoms independently selected from F and Cl;

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R³, R⁴ and R⁵ are independently selected from the group consisting of hydrogen, F, Cl, C₁-3alkyl, and -OC₁-3alkyl, where C₁-3alkyl and -OC₁-3alkyl are optionally substituted with 1-3 halogens independently selected from F and Cl;

X and Y are each independently selected from the group consisting of O, S, SO, and SO₂; and

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n represents an integer selected from 1, 2, 3, and 4.

2. A compound according to Claim 1 wherein

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R² is selected from H, F, -OC₁-3 alkyl, and -S(O)₂CH₃, where -OC₁-3 alkyl is optionally substituted with 1-3 F atoms.

3. A compound according to Claim 1, wherein R¹ is selected from Cl and n-propyl;

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R² is selected from H and F; and

R³, R⁴ and R⁵ are H.

- 5 4. A compound according to Claim 1, wherein R² is -OCH₂CH₃ or -OCH₂CF₃.
- 10 5. A compound according to Claim 1, wherein R⁵ is H; and R³ and R⁴ are each independently selected from H, F, CH₃, CF₃, -OCH₃, -OCF₃, -OCH₂CH₃ and -OCH₂CF₃. In other preferred groups of compounds, R³ and R⁴ are H, and R⁵ is selected from the group consisting of H, F, CH₃, CF₃, -OCH₃, -OCF₃, -OCH₂CH₃ and -OCH₂CF₃.
- 15 6. A compound according to Claim 1, wherein X and Y are each independently selected from O and S.
7. A compound according to Claim 1, wherein X and Y are each O.
- 20 8. A compound according to Claim 1, wherein the group X is attached to the phenyl of the N-cyclohexylaminocarbonyl benzenesulfonamide moiety at the position that is meta to the sulfonamide group.
- 25 9. A compound according to Claim 1, wherein the group X is attached to the phenyl of the N-cyclohexylaminocarbonyl benzenesulfonamide moiety at the position that is para to the sulfonamide group.
10. A compound according to Claim 1, wherein n is 1-3.
- 30 11. A compound according to Claim 1, wherein n is 3 or 4.
12. A compound according to Claim 1, wherein X and Y are O; n is an integer selected from 1-3; R³, R⁴ and R⁵ are H; R¹ is selected from n-propyl and Cl; and R² is selected from H, F, and -S(O)₂CH₃.

13. A compound according to Claim 1, wherein R¹ is C₂₋₃ alkyl, which is optionally substituted with 1-3 F atoms.

5 14. A compound according to Claim 1, wherein R¹ is n-propyl.

15. A compound which is selected from the compounds in Examples 1-9, and pharmaceutically acceptable salts thereof.

10 16. A pharmaceutical composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.

15 17. A method for treating hyperglycemia in a mammalian or human patient having non-insulin dependent (Type 2) diabetes mellitus which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

20 18. A method for treating type 2 diabetes in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

25 19. A method for treating lipid disorders, hyperlipidemia, and low HDL in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

30 20. A method for treating or controlling obesity in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

35 21. A method for treating or controlling hypercholesterolemia in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

22. A method for treating hypertriglyceridemia in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

5 23. A method for treating dyslipidemia and/or low HDL cholesterol in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

10 24. A method for treating or reducing the risk of developing atherosclerosis in a mammalian or human patient in need of such treatment which comprises administering to said patient a therapeutically effective amount of a compound of Claim 1.

15 25. A method of treating or controlling one or more diseases, disorders, or conditions selected from the group consisting of (1) non-insulin dependent diabetes mellitus (NIDDM), (2) hyperglycemia, (3) low glucose tolerance, (4) insulin resistance, (5) obesity, (6) lipid disorders, (7) dyslipidemia, (8) hyperlipidemia, (9) hypertriglyceridemia, (10) hypercholesterolemia, (11) low HDL
20 levels, (12) high LDL levels, (13) atherosclerosis and its sequelae, (14) vascular restenosis, (15) irritable bowel syndrome, (16) inflammatory bowel disease, including Crohn's disease and ulcerative colitis, (17) other inflammatory conditions, (18) pancreatitis, (19) abdominal obesity, (20) neurodegenerative disease, (21) retinopathy, (22) neoplastic conditions, (23) adipose cell tumors, (24) adipose cell
25 carcinomas, such as liposarcoma, (25) prostate cancer and other cancers, including gastric, breast, bladder and colon cancers, (26) angiogenesis, (27) Alzheimer's disease, (28) psoriasis, (29) high blood pressure, (30) Syndrome X, (31) ovarian hyperandrogenism (polycystic ovarian syndrome), and other disorders where insulin resistance is a component, said method comprising the administration of an effective
30 amount of a compound of Claim 1.

26. A method of treating one or more diseases, disorders, or conditions selected from the group consisting of (1) diabetes mellitus, and especially non-insulin dependent diabetes mellitus (NIDDM), (2) hyperglycemia, (3) low
35 glucose tolerance, (4) insulin resistance, (5) obesity, (6) lipid disorders, (7)

- dyslipidemia, (8) hyperlipidemia, (9) hypertriglyceridemia, (10) hypercholesterolemia, (11) low HDL levels, (12) high LDL levels, (13) atherosclerosis and its sequelae, (14) vascular restenosis, (15) irritable bowel syndrome, (16) inflammatory bowel disease, including Crohn's disease and ulcerative colitis, (17) other inflammatory conditions, (18) pancreatitis, (19) abdominal obesity, (20) neurodegenerative disease, (21) retinopathy, (22) neoplastic conditions, (23) adipose cell tumors, (24) adipose cell carcinomas, such as liposarcoma, (25) prostate cancer and other cancers, including gastric, breast, bladder and colon cancers, (26) angiogenesis, (27) Alzheimer's disease, (28) psoriasis, (29) high blood pressure, (30) Syndrome X, (31) ovarian hyperandrogenism (polycystic ovarian syndrome), and other disorders where insulin resistance is a component, said method comprising the administration of an effective amount of a compound of Claim 1, and an effective amount of one or more other compounds selected from the group consisting of:
- 15 (a) other compounds that are used in the treatment of type 2 diabetes, including (i) PPAR agonists, such as the glitazones (e.g. troglitazone, pioglitazone, englitazone, MCC-555, rosiglitazone, and the like), and compounds disclosed in WO97/27857, 97/28115, 97/28137 and 97/27847; (ii) biguanides such as metformin and phenformin; (iii) protein tyrosine phosphatase-1B (PTP-1B) inhibitors, and (iv) 20 dipeptidyl peptidase IV (DP-IV) inhibitors;
 - (b) insulin or insulin mimetics;
 - (c) sulfonylureas such as tolbutamide and glipizide, or related materials;
 - (d) α -glucosidase inhibitors (such as acarbose);
 - 25 (e) cholesterol lowering agents such as (i) HMG-CoA reductase inhibitors (lovastatin, simvastatin, pravastatin, fluvastatin, atorvastatin, rivastatin, itavastatin, ZD-4522 and other statins), (ii) sequestrants (cholestyramine, colestipol, and dialkylaminoalkyl derivatives of a cross-linked dextran), (iii) nicotinic alcohol, nicotinic acid or a salt thereof, (iv) PPAR α agonists such as fenofibric acid 30 derivatives (gemfibrozil, clofibrate, fenofibrate and benzafibrate), (v) PPAR α/γ dual agonists, such as KRP-297, (vi) inhibitors of cholesterol absorption, such as for example beta-sitosterol, (vii) acyl CoA:cholesterol acyltransferase inhibitors, such as for example avasimibe, and (viii) anti-oxidants, such as probucol;
 - (f) PPAR δ agonists such as those disclosed in WO97/28149;

(g) antiobesity compounds such as fenfluramine, dexfenfluramine, phentiramine, sulbitramine, orlistat, neuropeptide Y5 inhibitors, and β_3 adrenergic receptor agonists;

(h) an ileal bile acid transporter inhibitor; and

5 (i) agents intended for use in inflammatory conditions such as aspirin, non-steroidal anti-inflammatory drugs, glucocorticoids, azulfidine, and cyclo-oxygenase 2 selective inhibitors.

10 27. A method for treating one or more conditions selected from hypercholesterolemia, atherosclerosis, low HDL levels, high LDL levels, hyperlipidemia, hypertriglyceridemia, and dyslipidemia, which method comprises administering to a mammalian or human patient in need of such treatment a therapeutically effective amount of a compound of Claim 1.

15 28. A method for treating one or more conditions selected from hypercholesterolemia, atherosclerosis, low HDL levels, high LDL levels, hyperlipidemia, hypertriglyceridemia, and dyslipidemia, which method comprises administering to a mammalian or human patient in need of such treatment a therapeutically effective amount of a combination of a compound of Claim 1 and an
20 HMG-CoA reductase inhibitor.

29. The method as recited in Claim 28, wherein the HMG-CoA reductase inhibitor is a statin.

25 30. The method as recited in Claim 29, wherein the statin is selected from the group consisting of lovastatin, simvastatin, pravastatin, fluvastatin, atorvastatin, itavastatin, ZD-4522 and rivastatin.

30 31. A method for treating one or more conditions selected from inflammatory conditions, inflammatory bowel disease, Crohn's disease, and ulcerative colitis, which method comprises administering to a mammalian or human patient in need of such treatment a therapeutically effective amount of a compound of Claim 1.

35 32. A method for treating atherosclerosis in a mammalian or human patient in need of such treatment comprising the administration to said patient

of an effective amount of a combination of a compound of Claim 1 and an HMG-CoA reductase inhibitor.

33. A pharmaceutical composition comprising (1) a compound of Claim 1, (2) one or more compounds selected from the group consisting of
- (a) insulin sensitizers including (i) PPAR gamma agonists such as the glitazones (e.g. troglitazone, pioglitazone, englitazone, MCC-555, rosiglitazone, and the like), and compounds disclosed in WO97/27857, 97/28115, 97/28137 and 97/27847; (ii) biguanides such as metformin and phenformin; (iii) protein tyrosine phosphatase-1B (PTP-1B) inhibitors, and (iv) dipeptidyl peptidase IV (DP-IV) inhibitors;
 - (b) insulin or insulin mimetics;
 - (c) sulfonylureas such as tolbutamide and glipizide, or related materials;
 - (d) α -glucosidase inhibitors (such as acarbose);
 - (e) cholesterol lowering agents such as (i) HMG-CoA reductase inhibitors (lovastatin, simvastatin, pravastatin, fluvastatin, atorvastatin, rivastatin, itavastatin, ZD-4522 and other statins), (ii) sequestrants (cholestyramine, colestipol, and dialkylaminoalkyl derivatives of a cross-linked dextran), (iii) nicotinic acid or a salt thereof, (iv) PPAR α agonists such as fenofibric acid derivatives (gemfibrozil, clofibrate, fenofibrate and benza-fibrate), (v) PPAR α / γ dual agonists, such as KRP-297, (vi) inhibitors of cholesterol absorption, such as for example beta-sitosterol, (vii) acyl CoA:cholesterol acyltransferase inhibitors, such as for example avasimibe, and (viii) anti-oxidants, such as probucol;
 - (f) PPAR δ agonists such as those disclosed in WO97/28149;
 - (g) antiobesity compounds such as fenfluramine, dexfenfluramine, phentiramine, sulbitramine, orlistat, neuropeptide Y5 inhibitors, and β_3 adrenergic receptor agonists;
 - (h) an ileal bile acid transporter inhibitor; and
 - (i) agents intended for use in inflammatory conditions such as aspirin, non-steroidal anti-inflammatory drugs, glucocorticoids, azulfidine, and cyclo-oxygenase 2 selective inhibitors; and
- (3) a pharmaceutically acceptable carrier.